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10/698,820	10/31/2003	Matthew Englehart	MWS-062	1288

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EXAMINER

CHEN, QING

ART UNIT	PAPER NUMBER
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2191

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/698,820	Applicant(s) ENGLEHART ET AL.	
	Examiner Qing Chen	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is in response to the amendment filed on January 22, 2007.
2. **Claims 1-26** are pending.
3. **Claims 2-10 and 12-25** have been amended.
4. The objections to the specification are withdrawn in view of Applicant's amendments to the specification.
5. The objections to Claims 2-10, 12-15, and 17-25 are withdrawn in view of Applicant's amendments to the claims.
6. The 35 U.S.C. § 101 rejections of Claims 12-26 are maintained in view of Applicant's amendments to the claims and further explained below.

Response to Amendment

Drawings

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

- Reference numbers 85, 87, 89, 91, and 95 on page 8.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is

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to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the Examiner, the Applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

8. **Claims 16-26** are objected to because of the following informalities:

- **Claim 16** recites the limitation "said medium." Applicant is advised to change this limitation to read "said computer-readable medium" for the purpose of providing it with proper explicit antecedent basis.
- **Claims 17-26** depend on Claim 16 and, therefore, suffer the same deficiency as Claim 16.
- **Claims 17-26** recite the limitation "the medium." Applicant is advised to change this limitation to read "the computer-readable medium" for the purpose of providing it with proper explicit antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. **Claims 12-26** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 12-15 are directed to electronic devices. However, the recited components of the electronic devices appear to lack the necessary physical components (hardware) to constitute a machine or manufacture under § 101. Therefore, these claim limitations can be reasonably interpreted as computer program modules—software *per se*. The claims are directed to electronic devices of functional descriptive material *per se*, and hence non-statutory.

The claims constitute computer programs representing computer listings *per se*. Such descriptions or expressions of the programs are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element, which defines structural and functional interrelationships between the computer program and the rest of the computer, that permits the computer program’s functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 16-26 recite computer-readable medium as a claimed element. However, the limitation of “said [computer-readable] medium holding instructions” can be reasonably interpreted as the computer-readable medium carrying or transmitting electrical signals, since the instructions are not recorded on the computer-readable medium, so as to permit the function of the descriptive material to be realized when executed.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism *per se*, and as such are non-statutory natural phenomena. *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-14 (1853). Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. **Claims 1-4, 6-8, 12-14, 16-19, and 21-23** are rejected under 35 U.S.C. 102(b) as being anticipated by **Cheng et al.** (US 2002/0010908).

As per **Claim 1**, Cheng et al. disclose:

- providing a user interface with a plurality of selectable parameters for a custom storage class, said custom storage class specifying the manner in which an automatic code generator creates source code corresponding to data referenced by said graphical model in said graphical modeling and execution environment (*see Figures 4, 6, and 7; Paragraph [0026], "FIG. 7 shows an exemplary GUI 400 for command node editor 120."; Paragraph [0028], "The entering of parameters is also accomplished via GUI 400 by adding the desired parameters to parameter field 410."; Paragraph [0043], "Handler code generation engine 135 automatically generates this software code using the information entered by the developer and the parameter and handler function definitions generated by command structure generation engine 145.";* and
- creating a custom storage class in said graphical modeling and execution environment utilizing parameters selected by a user from said plurality of selectable parameters (*see Figure 6: 360; Paragraph [0039], "... the handler function definitions and parameter definitions are generated by command structure generation engine." and "... command structure generation engine takes the information input by the developer and generates a file containing the information for the handler functions and parameters."; Paragraph [0040], "This code describes an exemplary parameter definition array mCommand3Params for command3."; Paragraph [0042], "This code describes an exemplary handler function definition array mCommand3Handlers for command3.").*

As per **Claim 2**, the rejection of **Claim 1** is incorporated; and Cheng et al. further disclose:

- providing a view of salient aspects of the source code generated by said automatic code generator utilizing the user-selected parameters (*see Figure 11; Paragraph [0046], "GUI displays the code generated by handler code generation engine so that the developer may view, review and accept the automatically generated code."*).

As per **Claim 3**, the rejection of **Claim 2** is incorporated; and Cheng et al. further disclose:

- changing the user-selected parameters for said custom storage class in said user interface (*see Paragraph [0051], "... a developer edits parameters in a handler function through GUI ..."*); and
- adjusting the source code generated by said automatic code generator to reflect the change in user-selected parameters (*see Paragraph [0051], "... the command structure, the handler function definitions, the parameter definitions and the handler function code is automatically generated based on the information provided by the developer and therefore may need to be revised based on any changed or additional information provided by the developer."* and *"... these changes will be automatically reconciled in the handler function code by handler code generation engine."*).

As per **Claim 4**, the rejection of **Claim 3** is incorporated; and Cheng et al. further disclose:

- displaying salient aspects of the adjusted source code in said view of salient aspects of the source code (*see Paragraph [0044], "This code may be viewed as it is being generated in code view field of GUI as parameters are being added to the handler function."*).

As per **Claim 6**, the rejection of **Claim 1** is incorporated; and Cheng et al. further disclose:

- wherein said custom storage class declares macros for instances of constant data (*see Paragraph [0038], "... #define kCommand3Help "\help string for command 3\" ... "*).

As per **Claim 7**, the rejection of **Claim 1** is incorporated; and Cheng et al. further disclose:

- wherein said custom storage class declares variables for instances of constant data (*see Paragraph [0040], "The exemplary code may include the following information: keyword or name, data type (e.g., integer, boolean, etc.), a unique bitmask identifier ... "*).

As per **Claim 8**, the rejection of **Claim 1** is incorporated; and Cheng et al. further disclose:

- wherein said user-selected parameters control at least one of the manner in which automatically generated source code is defined, declared, accessed and addressed (*see Paragraph [0043], "Handler code generation engine automatically generates this software code using the information entered by the developer and the parameter and handler function definitions generated by command structure generation engine."*).

As per **Claim 12**, Cheng et al. disclose:

- a user interface with a plurality of selectable parameters for a custom storage class, said custom storage class specifying the manner in which an automatic code generator creates source code from said graphical model (*see Figures 4, 6, and 7; Paragraph [0026], "FIG. 7 shows an exemplary GUI 400 for command node editor 120."; Paragraph [0028], "The entering of parameters is also accomplished via GUI 400 by adding the desired parameters to parameter field 410."; Paragraph [0043], "Handler code generation engine 135 automatically generates this software code using the information entered by the developer and the parameter and handler function definitions generated by command structure generation engine 145.";*
- a custom storage class in said graphical modeling and execution environment, said custom storage class created utilizing parameters selected by a user from said plurality of selectable parameters (*see Figure 6: 360; Paragraph [0039], "... the handler function definitions and parameter definitions are generated by command structure generation engine." and "... command structure generation engine takes the information input by the developer and generates a file containing the information for the handler functions and parameters.";* Paragraph [0040], *"This code describes an exemplary parameter definition array mCommand3Params for command3."; Paragraph [0042], "This code describes an exemplary handler function definition array mCommand3Handlers for command3.";* and
- a view of salient aspects of the source code generated by said automatic code generator utilizing the user-selected parameters (*see Figure 11; Paragraph [0046], "GUI*

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displays the code generated by handler code generation engine so that the developer may view, review and accept the automatically generated code.").

As per **Claim 13**, the rejection of **Claim 12** is incorporated; and Cheng et al. further disclose:

- wherein the user-selected parameters for said custom storage class in said user interface are changed and the source code generated by said automatic code generator is adjusted to reflect the change user-selected parameters (*see Paragraph [0051], "... a developer edits parameters in a handler function through GUI ..." and "... the command structure, the handler function definitions, the parameter definitions and the handler function code is automatically generated based on the information provided by the developer and therefore may need to be revised based on any changed or additional information provided by the developer." and "... these changes will be automatically reconciled in the handler function code by handler code generation engine."*).

As per **Claim 14**, the rejection of **Claim 13** is incorporated; and Cheng et al. further disclose:

- wherein the adjusted source code is displayed in said view of salient aspects of the source code (*see Paragraph [0044], "This code may be viewed as it is being generated in code view field of GUI as parameters are being added to the handler function."*).

Claims 16-19 and 21-23 are computer-readable medium claims corresponding to the method claims above (Claims 1-4 and 6-8, respectively) and, therefore, are rejected for the same reasons set forth in the rejections of Claims 1-4 and 6-8, respectively.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claims 5, 15, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cheng et al. (US 2002/0010908)** in view of **Childress et al. (US 2004/0085357)**.

As per **Claim 5**, the rejection of **Claim 2** is incorporated; however, **Cheng et al.** do not disclose:

- wherein said view of salient aspects of the source code automatically generated includes at least one token, said token being symbolically representative of a non-displayed segment of source code.

Childress et al. disclose:

- wherein said view of salient aspects of the source code automatically generated includes at least one token, said token being symbolically representative of a non-displayed segment of source code (*see Paragraph [0115], "... code may be included as 'hidden' text in*

one or more sections of documents, and may be used in constructing header tables and text tables.").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Childress et al. into the teaching of Cheng et al. to include wherein said view of salient aspects of the source code automatically generated includes at least one token, said token being symbolically representative of a non-displayed segment of source code. The modification would be obvious because one of ordinary skill in the art would be motivated to minimize the usage of available memory.

As per **Claim 15**, the rejection of **Claim 12** is incorporated; however, Cheng et al. do not disclose:

- wherein said view of salient aspects of the source code includes at least one token, said token being symbolically representative of a non-displayed segment of code.

Childress et al. disclose:

- wherein said view of salient aspects of the source code includes at least one token, said token being symbolically representative of a non-displayed segment of code (*see Paragraph [0115], "... code may be included as 'hidden' text in one or more sections of documents, and may be used in constructing header tables and text tables."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Childress et al. into the teaching of Cheng et al. to include wherein said view of salient aspects of the source code includes at least one token, said token being symbolically representative of a non-displayed segment of code. The

modification would be obvious because one of ordinary skill in the art would be motivated to minimize the usage of available memory.

Claim 20 is rejected for the same reason set forth in the rejection of Claim 5.

15. **Claims 9, 10, 24, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cheng et al.** (US 2002/0010908) in view of **Davidov et al.** (US 2003/0225774).

As per **Claim 9**, the rejection of **Claim 1** is incorporated; however, **Cheng et al.** do not disclose:

- wherein said user-selected parameter includes a non-portable directive to a compiler.

Davidov et al. disclose:

- wherein said user-selected parameter includes a non-portable directive to a compiler (*see Paragraphs [0092] and [0214], "Command line options or directives for the compiler ..." and "The compiler compiles Java source code produced by the generator according to supplied directives.").*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of **Davidov et al.** into the teaching of **Cheng et al.** to include wherein said user-selected parameter includes a non-portable directive to a compiler. The modification would be obvious because one of ordinary skill in the art would be motivated to conveniently and dynamically create software programs that can be executed on a computer system.

As per **Claim 10**, the rejection of **Claim 9** is incorporated; however, Cheng et al. do not disclose:

- wherein said non-portable directive to a compiler assigns data to at least one memory location in said electronic device.

Davidov et al. disclose:

- wherein said non-portable directive to a compiler assigns data to at least one memory location in said electronic device (*see Paragraph [0160], "The data is loaded when the application is started, and is saved when the application is destroyed. This type of persistence uses the device records management system (RMS), for example, non-volatile memory."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Davidov et al. into the teaching of Cheng et al. to include wherein said non-portable directive to a compiler assigns data to at least one memory location in said electronic device. The modification would be obvious because one of ordinary skill in the art would be motivated to store data that can be utilized at a later time.

Claim 24 is rejected for the same reason set forth in the rejection of Claim 9.

Claim 25 is rejected for the same reason set forth in the rejection of Claim 10.

16. **Claims 11 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. (US 2002/0010908) in view of DeMaster (US 6,066,181).

As per **Claim 11**, the rejection of **Claim 1** is incorporated; however, Cheng et al. do not disclose:

- creating a separate header file with said automatic code generator in response to the selection of one of said plurality of user-selected parameters.

DeMaster discloses:

- creating a separate header file with said automatic code generator in response to the selection of one of said plurality of user-selected parameters (*see Column 4: 55-57, "... the Java native interface code generator generates Java Classes and data conversion code stubs (and related header files)."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of DeMaster into the teaching of Cheng et al. to include creating a separate header file with said automatic code generator in response to the selection of one of said plurality of user-selected parameters. The modification would be obvious because one of ordinary skill in the art would be motivated to allow software portability, so that software applications may easily be moved to another environment (*see DeMaster – Column 1: 23-25*).

Claim 26 is rejected for the same reason set forth in the rejection of Claim 11.

Response to Arguments

17. Applicant's arguments filed on January 22, 2007 have been fully considered, but they are not persuasive.

In the remarks, Applicant argues that:

a) First, Cheng fails to disclose a "custom storage class," as recited by claim 1. A custom storage class specifies the manner in which an automatic code generator creates source code for data referenced by a graphical model. The custom storage class recited by claim 1 is a class, which is an object oriented feature. Cheng does not teach or suggest using a custom storage class. Further, the parameter and handler function definition files, as recited in Cheng, are not shown to be object-oriented features.

Examiner's response:

a) Examiner disagrees. Cheng et al. clearly disclose a "custom storage class," as recited by claim 1 (*see Paragraph [0039], "... the handler function definitions and parameter definitions are generated by command structure generation engine" and "command structure generation engine takes the information input by the developer and generates a file containing the information for the handler functions and parameters"; Paragraph [0040], "This code describes an exemplary parameter definition array mCommand3Params for command3."; Paragraph [0042], "This code describes an exemplary handler function definition array mCommand3Handlers for command3."*). Note that the handler function definitions and parameter definitions are interpreted as "custom storage class," where handler code generation engine automatically generates software code using the information from the handler function definitions and parameter definitions.

Examiner also disagrees with Applicant's assertion that "custom storage class" is an object-oriented class. The specification does not provide an explicit definition that describes "custom storage class" as an object-oriented feature. Therefore, "custom storage class" is being treated under broadest reasonable interpretation consistent with the specification.

In the remarks, Applicant argues that:

b) As described in the above excerpt, in Cheng, the parameter definition file and handler function definition file generated by the command structure generation engine include information on the parameter function and handler function, respectively. In contrast, the custom storage class recited by claim 1 specifies the manner in which an automatic code generator creates source code. Cheng does not disclose that the definition files specify "the manner in which an automatic code generator creates source code," as required by claim 1.

Examiner's response:

b) Examiner disagrees. Cheng et al. clearly disclose that the definition files specify "the manner in which an automatic code generator creates source code," as required by claim 1 (*see Paragraph [0040], "The exemplary code above may include the following information: keyword or name, data type (e.g., integer, boolean, etc.), a unique bitmask identifier, relative position to a given sequence of parameters, flags, and a pointer to a structure that may have more detailed information on the parameter."*; Paragraph [0042], "The exemplary code above may include the following information: the type of command (e.g., can this command handle "No" forms), the bitmask of required parameters, the bitmask of optional parameters and the actual handler

function associated with the definition.”). Note that the provided information indicate to the handler code generation engine on how to generate the handler function code.

In the remarks, Applicant argues that:

c) The software code in Cheng is associated with the handler function. The handler function is, in turn, associated with the command nodes in a command tree. Thus, in Cheng, the software code corresponds to command nodes in a command tree. In contrast, claim 1 of the current application requires that the source code corresponds to data referenced by a graphical model in a graphical modeling and execution environment. Thus, Cheng fails to disclose that the software code associated with the handler function "corresponds to data referenced by a graphical model," as required by claim 1.

Examiner's response:

c) Examiner disagrees. Cheng et al. clearly disclose that the software code associated with the handler function "corresponds to data referenced by a graphical model," as required by claim 1 (*see Figure 4; Paragraph [0023], "FIG. 4 shows an exemplary command graphical user interface ("GUI") 200 for command structure manifest 110 described with respect to FIG. 2. Command structure manifest 110 enables a developer to visually manipulate the command structure by adding and deleting command nodes at any level." and "... GUT (sic) 200 also shows parameters and handler functions associated with each command node.*”). Note that the handler function code is generated as a result of a new command node being inserted into the command structure.

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'WZ' followed by a long diagonal stroke.

WEI ZHEN
SUPERVISORY PATENT EXAMINER

QC / ac
March 5, 2007